<u>REMARKS</u>

The application has been carefully reviewed in light of the Office Action dated December 11, 2007. Reconsideration and further examination are respectfully requested.

Initially, Applicants thank the Examiner for reconsideration and withdrawal of the § 112 rejection.

The Office Action entered rejections of independent Claims 1, 29, 57 and 85 under 35 U.S.C. § 103(a) over European Patent No. 952513 (White), U.S. Patent No. 6,678,068 (Richter) and the background of the invention (AAPA) in view of U.S. Patent No. 5,930,465 (Bellucco). The remaining claims are dependent, and were rejected as above, or with Bellucco replaced by U.S. Patent No. 6,820,124 (Clough) or U.S. Patent No. 6,628,413 (Lee). These rejections are traversed, and the Examiner is respectfully requested to withdraw the rejections in light of the following comments and the accompanying Declaration Under 37 C.F.R. § 1.132 Of Eric Riggert.

As explained in prior responses, the present invention generally concerns managing print queues for a plurality of printing devices on a network. According to one aspect of the invention, a maximum number of printing devices to be supported is designated by a system administrator, and in this designation, the administrator uses a user interface for print queue management. Furthermore, a print queue is not created for a printing device once an existing number of print queues has reached the designated maximum number.

The Office Action maintains that the applied art discloses a system administrator designating a maximum number of printing devices to be supported using a print queue management user interface, wherein a print queue is not created for a printing device once an existing number of print queues has reached the designated maximum number. Applicants respectfully submit that when the invention and applied art are viewed through the eyes of one of ordinary skill in the art (as in the accompanying Declaration), the Office Action's conclusion can not properly be maintained.

In this regard, the Office Action appears to rely primarily on Bellucco for disclosure of the above-noted features, but first draws a number of conclusions regarding other references, particularly White, as support for the rejection. Accordingly, Applicants will address these points before turning to Bellucco.

Pages 3 and 6 of the Office Action concede that "[n]either White [n]or Richter discloses wherein the system administrator designates a maximum number of printing devices to be supported."

Nevertheless, the Office Action appears to rely on a combination of White and the AAPA for this feature. In particular, according to page 3 of the Office Action, "[White's] system must have maximum number of devices in the system (DHCP server only contains limited IP addresses available for Printers, if not, the DHCP server would not issue any IP address for available printers[)]", and "it would have been obvious to one of ordinary skill in the art...to designate the maximum number of printing device be supported in the system since the DHCP server in White will only allow limited number of IP address to be assigned to the printer." From this, it is Applicants' understanding that the USPTO is

drawing the inference that those of ordinary skill are familiar with limits in general, and thus would recognize that there are limits on the number of print queues that can be created.

Applicants respectfully submit that one of ordinary skill in the art would recognize that from a practical standpoint, there is no limit on IP addresses, in White's system or elsewhere:

> "With NAT in common use, each LAN needs only one such public IP address, with requests to and from computers within the LAN brokered by a router which translates an arbitrary number of internal IPv4 address (up to 4 billion, theoretically). Therefore, from the point of view of a person of ordinary skill in the art, there would be no upper bound on the number of available IP addresses. IPv6 addressing, which could also be used, further marginalizes any potential concern regarding the number of available IP addresses. IPv6 is designed to eliminate the need for NAT, since it supports 2^{128} unique addresses. Even with a world population in excess of 6.5 billion, IPv6 still allows for 5.2×10^{28} addresses for each person alive today."
> Declaration Under 37 C.F.R. § 1.132 Of Eric Riggert, pages 3 and 4.

Accordingly, one of ordinary skill in the art would not draw the conclusion that White suggests any limit on creation of print queues based on IP addresses:

> "Thus, regardless of the IP address standard under consideration, a person of ordinary skill in the art would not draw the assumption that the mere presence of a DHCP server would necessarily imply a maximum number of IP address, or that a DHCP server would ever 'run out' of a limited pool of addresses. White is simply silent on this issue because it is of no concern." Declaration Under 37 C.F.R. § 1.132 Of Eric Riggert, page 4.

Moreover, the concept of an DHCP server refusing to assign an address to a printer, based on having no more "printer IP addresses," is invalid:

> "A person of ordinary skill in the art would not come to this conclusion regarding specific printer IP addresses, and would instead consider the concept of network IP addresses, and printers, or any specific device type, to simply be 'different,' because the DHCP server has no concept of a printer - it is just another device, connected to the network. In conclusion, a person of ordinary technical skill in the art would not agree that the number of IP addresses available for printers is limited due to the presence of a DHCP server." Declaration Under 37 C.F.R. § 1.132 Of Eric Riggert, pages 4 and 5.

Nonetheless, page 6 of the Office Action asserts that the AAPA (paragraphs [0006] to [0009]) discloses a system administrator designating a number of printing devices to be supported using a print queue management user interface. Applicants respectfully submit that one of ordinary skill in the art would disagree with this characterization of the AAPA:

> "It would be clear to a person of ordinary skill in the art that the purpose and content of the referenced paragraphs [in the AAPA] is to describe the tedious nature of the conventional manual administration process for printing devices, and that these passages do not disclose the administrator specifying a maximum number of printing devices to be supported using a print queue management user interface...The act of manually entering the printer device information necessary to create a queue for a new printing device is radically different than the idea of providing a new and hitherto unique print queue management user interface which is used to specify a maximum number of print queues to allow on the print server during automatic printer detection and queue creation." Declaration Under 37 C.F.R. § 1.132 Of Eric Riggert, pages 6 and 7.

Turning now to the Bellucco reference, pages 3 and 7 of the Office Action concede that "[n]either White, Richter nor AAPA discloses a print queue is not created for a printing device once an existing number of print queue have reached the designated maximum number".

Nevertheless, the Office Action asserts that "Bellucco discloses the number of queue is limited by the amount of available memory (RAM) available in the server (refer to Col 6, Lines 55-65), and each queue is associated with associated with one or more printing device (refer to Col 4, Lines 55-61). Therefore, it is obvious that the system administrator would not create a print queue for a print device once an existing number of print queues has reached the designated maximum numbers. (amount of RAM/resources available is limited when supporting the number of print devices in the network, and the print queue would not be created since all the current printing devices have allocated all the resources/RAM/IP addresses.)." Office Action, page 3; see also Office Action, page 7.

A person of ordinary skill in the art would disagree with the above statements for a number of reasons.

First, as discussed above, the concept of IP addresses as a limited resource at the time of the invention is invalid. Rather, those of ordinary skill would view the number of available IP addresses as a practically unlimited resource.

Second, RAM as a limited resource at the time of the invention was also an obsolete idea, given that all modern server operating systems allow for the concept of virtual memory. In particular:

"RAM is generally not a limited resource, and was not at the
time of this art. Virtual memory, whereby portions of mass
storage are used to temporarily store the contents of blocks or
pages of physical memory (RAM) while that memory is used
for secondary functionality, is a concept common to all
modern operating systems. As necessary, these blocks or
pages of memory are exchanged, or swapped with the
content of physical RAM, thereby acting as additional
memory space by allowing the faster physical RAM to be
reused for another purpose. Thus, a typical server is not
limited by the amount of physical RAM, but is instead
limited by the (typically much larger) amount of mass
storage available for virtual memory space or swap storage."
Declaration Under 37 C.F.R. § 1.132 Of Eric Riggert, page
10.

Accordingly, one of ordinary skill in the art would understand that available

RAM does not impose any limit on a number of print queues:

"A person of ordinary skill in the art would most likely
consider available physical RAM to be of no consequence
when creating print queues, given that the quantity of RAM
would not, in reality, limit the ability to create a queue.
Thus, one of ordinary skill in the art would recognize that
there is no practical limit imposed by RAM on a number of
print queues that can be created, just as there is no practical
limit imposed by IP addresses on a number of print queues
that can be created." Declaration Under 37 C.F.R. § 1.132
Of Eric Riggert, page 10.

Furthermore, even accepting *solely* for purpose of argument that hardware

limitations such as RAM could possibly impose a limit on a number of print queues, one of

ordinary skill in the art would recognize that such a hardware limit is different from a

limitation entered by a system administrator using a print queue management user

interface:

"If, for the sake of argument, a person of ordinary skill were
to consider the case of a resource constrained server, wherein
creating a print queue would fail due to running out of RAM,
or IP addresses, or some other system resource, the person of
ordinary skill would still, I believe, consider this case to be
different than the case in which a system administrator had, a
priori, specified a maximum number of printer devices to be
supported, using a print queue management user interface. In
the former case, the system has failed, and would not
function properly from that point in time onward without
reconfiguration. In the latter, the person of ordinary skill in
the art would understand that the system operation has been
failure-proofed by the foresight of a system administrator
who has imposed a limitation on the maximum number of
print queues, by designating a maximum number of printing
devices to be supported using a print queue management user
interface." Declaration Under 37 C.F.R. § 1.132 Of Eric
Riggert, pages 10 and 11.

Accordingly, one of ordinary skill in the art would conclude that the Office

Action's characterization of Bellucco, even if accepted solely for purpose of argument,

suggests limitations different from the claimed feature:

"Thus, one of ordinary skill in the art would recognize that a
hardware limitation on a number of print queues, such as the
USPTO's asserted limitation based on RAM or IP addresses,
is quite different from a system administrator designating a
maximum number of printing devices to be supported using
a print queue management user interface, wherein a print
queue is not created for a printing device once an existing
number of print queues has reached the designated maximum
number." Declaration Under 37 C.F.R. § 1.132 Of Eric
Riggert, page 11.

Thus, in light of the foregoing remarks and accompanying Declaration, it is

respectfully submitted that when the claimed invention is viewed as a whole, and that when

the invention and the cited art are viewed through the eyes of a person having ordinary skill

in the art at the time of the invention, that it cannot properly be concluded that the invention is unpatentable.

Therefore, independent Claims 1, 29, 57 and 85 are believed to be in condition for allowance, and such action is respectfully requested.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, the entire application is believed to be in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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